

What is claimed is:

1. A process for the preparation of biologically active somatotropin from inclusion bodies of a recombinant host cell containing an inactive form of said somatotropin protein, which comprises the steps of:

(a) contacting the inclusion bodies with an aqueous alcohol solution at an alkaline pH to solubilize said protein; and

(b) bringing the solubilized protein into contact with a mild oxidizing agent to refold and form intramolecular disulfide bonds between cysteine residues of said protein.

2. The process of claim 1, wherein the alcohol is n-propyl alcohol or isopropyl alcohol.

3. The process of claim 2, wherein the concentration of isopropyl alcohol or n-propyl alcohol in step (a) ranges from 10 to 50%.

4. The process of claim 2, wherein the concentration of isopropyl alcohol or n-propyl alcohol in step (b) ranges from 10 to 35%.

5. The process of claim 2, wherein isopropyl alcohol or n-propyl alcohol is removed before step (b).

6. The process of claim 1, wherein the mild oxidizing agent is air.

7. The process of claim 1, wherein said recombinant host is E. coli.

8. The process of claim 1, wherein said somatotropin is mammalian, avian or fish somatotropin.

9. The process of claim 1, wherein said somatotropin is human, bovine, porcine, horse, goat, ovine, canine, feline, chicken, flatfish, rockfish, salmon or eel somatotropin.

10. The process of claim 1, wherein said process is conducted at a temperature ranging from 0 to 50°C.

11. The process of claim 1, wherein step (a) is conducted at a pH above 9.

12. The process of claim 1, wherein step (b) is

conducted at a pH above 8.4.

13. The process of claim 1, wherein the concentration of somatotropin in step (a) ranges from 1 to 10 g/l.

14. The process of claim 1, wherein a reducing agent
5 is added to the aqueous solution in step (a).

15. The process of claim 14, wherein said reducing agent is 2-mercaptoethanol, cysteamine, glutathione, cysteine or a redox mixture thereof.

16. The process of claim 14, wherein said reducing
10 agent is 2-mercaptoethanol used at a concentration ranging from 0.0001% to 0.5%.

17. The process of claim 1, wherein a reducing agent is added in step (b).

18. The process of claim 17, wherein said reducing
15 agent is 2-mercaptoethanol, cysteamine, glutathione, cysteine or a mixture thereof.

19. The process of claim 17, wherein said reducing agent is 2-mercaptoethanol used at a concentration ranging from 0% to 0.25%.